Zero Waste Program – Case Study

ISTC HEADQUARTERS BUILDING

Founded in 1985, the Illinois Sustainable Technology Center (ISTC) has helped thousands of organizations and citizens implement sustainable solutions to environmental and economic challenges. ISTC's mission is to encourage and assist citizens and businesses to prevent pollution and reduce waste to protect human health and the environment in Illinois and beyond. ISTC's vision is to be a catalyst for change toward more sustainable technologies, processes, and practices through our integrated program of research, demonstration projects, technical assistance, and communication.

PURPOSE AND OBJECTIVES

The purposes of creating, implementing, testing, and refining a pilot Zero Waste program at ISTC was to investigate the feasibility of moving towards a Zero Waste lab. The primary objective was to explore the waste diversion activities of the Champaign office, with the aim of better practicing what we preach. The secondary objective was to provide the facility with an accurate and precise measurement of our landfill diversion rate.

THE WASTE CHARACTERIZATION PROCESS

The waste characterization process is part of the ISTC Zero Waste Program services. In most cases it is used to provide baseline metrics and to direct recommendations and policies towards key materials that have the greatest impact. The waste characterization involves a complete mapping of the current material management system at a facility, followed by a hands-on waste audit of all the discarded materials. This allows our team of technical assistance engineers to recommend and help implement process changes to improve the entire material management system of the facility. This also establishes a benchmark to measure the success of education, outreach and other actions to improve recycling and reduce the volume of waste material generated.

The study was designed to capture a weeklong material generation profile for the building. All samples were hand sorted into eleven material categories (results summarized on the next page)

CASE STUDY HIGHLIGHTS

Key stats

	67% diversion rate achieved 6 months after program launch (up from 30%)
	0.2 tons of material diverted from the landfill annually
CO_2	**3** estimated greenhouse gas avoidance ($mtCO_2e$)

About the Illinois Sustainable Technology Center

ISTC is a division of the Prairie Research Institute at the University of Illinois at Urbana-Champaign. We are headquartered in Champaign and have offices in Oak Brook, Peoria, and Godfrey.

# of Employees: **45**

Sector: **Research/Business Services**

Building Type: **Research Lab & Offices**

ABOUT OUR ZERO WASTE PROGRAM

ISTC's Zero Waste Program provides a variety of cost-effective, sustainable waste minimization and diversion services, provided by our staff of trained engineers and scientists.

Our team provides information and technical assistance on issues such as integrated waste management planning and process redesign to minimize waste generation and increase process efficiency.

CLICK HERE TO FIND OUT MORE

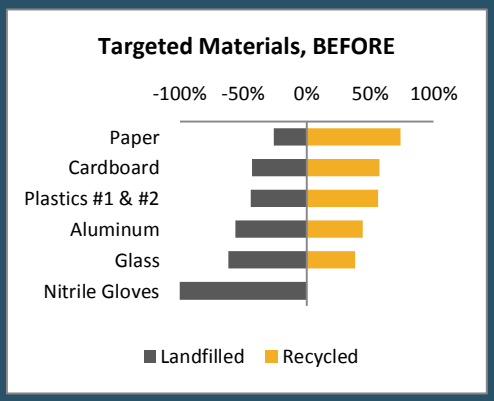
Zero Waste Solutions

ILLINOIS SUSTAINABLE TECHNOLOGY CENTER
PRAIRIE RESEARCH INSTITUTE

WASTE CHARACTERIZATION RESULTS

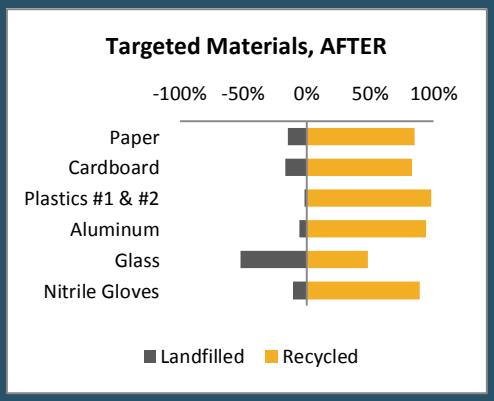
Before

Due mainly to a lack of collection and sorting infrastructure, the ISTC building was not capturing all of the recyclable material being used in the labs and offices. The initial waste characterization revealed the following diversion statistics for six highly recyclable materials:



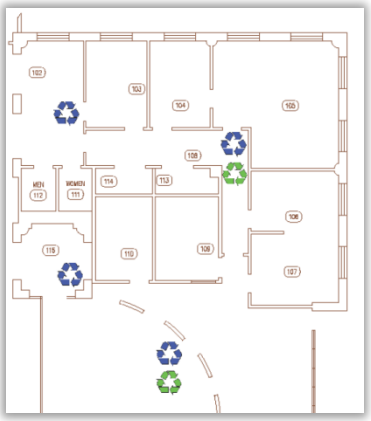
After

The post-implementation waste characterization revealed a drastic change in recycling percentages at ISTC – a result of the solutions devised by our Zero Waste team:



ISTC HEADQUARTERS BUILDING

BIN PLACEMENT & SIGNAGE



The Zero Waste team set out to make sure that recycling opportunities were both widely available and clearly communicated to staff throughout the building. The team removed desk-side garbage bins and created clustered disposal stations through the office, with different recycling and landfill receptacles available at each.

Each recycling station was outfitted with large and clear signage with photographic images of container types. The signage addressed items that commonly confuse people at the recycling bin, such as bottle caps and plastic clamshell food containers.

NITRILE GLOVES

Before

After

The baseline waste characterization showed that close to 10 percent of ISTC's landfilled waste stream consisted of laboratory gloves. Being a research facility with multiple laboratory facilities and with researchers working throughout the year, gloves are a constant and voluminous part of our discards. The Zero Waste team researched and identified a vendor that collects nitrile lab gloves and recycles them into mixed plastic structures such as park benches and road barriers. Purple bins, matching the color of the gloves, were placed throughout the ISTC labs and offices and have become a very recognizable sign of our quest for zero waste!

ONGOING IMPROVEMENTS

Other Zero Waste efforts being implemented at the ISTC Headquarters include:

- ✓ Water refill stations
- ✓ Reusable dishes
- ✓ Battery & cell phone recycling
- ✓ Automated paper towel dispensers

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